

## CLAIMS

What is claimed is:

1. A method for fabricating a microelectronic fabrication comprising:

providing a substrate;

forming over the substrate a bond pad formed of a conductor material selected from the group consisting of aluminum and aluminum alloy conductor materials;

forming upon the bond pad a conductor passivation layer formed of a noble metal conductor material.

2. The method of claim 1 wherein the noble metal conductor material is selected from the group consisting of gold, gold alloy, palladium, palladium alloy, platinum, platinum, nickel alloy conductor materials.

3. The method of claim 1 wherein the substrate is employed within a microelectronic fabrication selected from the group consisting of integrated circuit microelectronic fabrications, ceramic substrate microelectronic fabrications, solar cell optoelectronic microelectronic fabrications, sensor image array optoelectronic microelectronic fabrications and display image array optoelectronic microelectronic fabrications.

4. The method of claim 1 wherein the conductor passivation layer is formed directly upon the bond pad absent an additional barrier layer or conductor layer formed interposed between the bond pad and the conductor passivation layer.

5. A method for fabricating an optoelectronic microelectronic fabrication comprising:

providing a substrate employed within an optoelectronic microelectronic fabrication;

forming over the substrate a bond pad formed of a conductor material selected from the group consisting of aluminum and aluminum alloy conductor materials;

forming upon the bond pad a conductor passivation layer formed of a noble metal conductor material.

6. The method of claim 5 wherein the noble metal conductor material is selected from the group consisting of gold, gold alloy, palladium, palladium alloy, platinum, platinum alloy conductor materials.

7. The method of claim 5 wherein the optoelectronic microelectronic fabrication is selected from the group consisting of sensor image array optoelectronic microelectronic fabrications and display image array optoelectronic microelectronic fabrications.

8. The method of claim 5 wherein the conductor passivation layer is formed directly upon the bond pad absent an additional barrier layer or conductor layer formed interposed between the bond pad and the conductor passivation layer.

9. A microelectronic fabrication comprising:

a substrate<sup>10</sup>;

a bond<sup>15</sup> pad formed over the substrate<sup>10</sup>, the bond<sup>15</sup> pad being formed of a conductor material selected from the group consisting of aluminum and aluminum alloy conductor materials;

a conductor<sup>17</sup> passivation layer formed upon the bond<sup>15</sup> pad, the conductor passivation layer formed of a noble metal conductor material.

10. The microelectronic fabrication of claim 9 wherein the noble metal conductor material is selected from the group consisting of gold, gold alloy, palladium, palladium alloy, platinum, platinum alloy conductor materials.

11. The microelectronic fabrication of claim 9 wherein the substrate<sup>10</sup> is employed within a microelectronic fabrication selected from the group consisting of integrated circuit microelectronic fabrications, ceramic substrate microelectronic fabrications, solar cell optoelectronic microelectronic fabrications, sensor image array optoelectronic microelectronic fabrications and display image array optoelectronic microelectronic fabrications.

12. The microelectronic fabrication of claim 9 wherein the conductor passivation<sup>17</sup> layer is formed directly upon the bond<sup>15</sup> pad absent an additional barrier layer or conductor layer formed interposed between the bond pad and the conductor passivation layer.

13. An optoelectronic microelectronic fabrication comprising:

a substrate employed within an optoelectronic microelectronic fabrication;

a bond<sup>15</sup> pad formed over the substrate<sup>10</sup>, the bond pad being formed of a conductor material selected from the group consisting of aluminum and aluminum alloy conductor materials;

a conductor passivation<sup>17</sup> layer formed upon the bond pad, the conductor passivation layer formed of a noble metal conductor material.

14. The optoelectronic microelectronic fabrication of claim 13 wherein the noble metal conductor material is selected from the group consisting of gold, gold alloy, palladium, palladium alloy, platinum, platinum alloy conductor materials.

15. The optoelectronic microelectronic fabrication of claim 13 wherein optoelectronic microelectronic fabrication is selected from the group consisting of sensor image array optoelectronic microelectronic fabrications and display image array optoelectronic microelectronic fabrications.

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16. The optoelectronic microelectronic fabrication of claim 13 wherein the conductor passivation layer is formed directly upon the bond pad absent an additional barrier layer or conductor layer formed interposed between the bond pad and the conductor passivation layer.

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